

What is claimed:

1. An isolated nucleic acid molecule selected from the group consisting of:
  - 5 (a) a nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO: 1; and
  - (b) a nucleic acid molecule comprising the nucleotide sequence set forth in SEQ ID NO: 3.
- 10 2. An isolated nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2.
- 15 3. An isolated nucleic acid molecule comprising the nucleotide sequence contained in the plasmid deposited with ATCC® as Accession Number \_\_\_\_\_.
4. An isolated nucleic acid molecule which encodes a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2.
- Sub 101* 5. An isolated nucleic acid molecule selected from the group consisting of:
  - a) a nucleic acid molecule comprising a nucleotide sequence which is at least 60% identical to the nucleotide sequence of SEQ ID NO: 1 or 3, or a complement thereof;
  - 25 b) a nucleic acid molecule comprising a fragment of at least 107 nucleotides of a nucleic acid comprising the nucleotide sequence of SEQ ID NO: 1 or 3, or a complement thereof;
  - c) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence at least about 50% identical to the amino acid sequence of SEQ ID NO: 2; and
  - 30 d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO: 2, wherein the fragment comprises at least 15 contiguous amino acid residues of the amino acid sequence of SEQ ID NO: 2.
- 35 6. An isolated nucleic acid molecule which hybridizes to the nucleic acid molecule of any one of claims 1, 2, 3, 4, or 5 under stringent conditions.

7. An isolated nucleic acid molecule comprising a nucleotide sequence which is complementary to the nucleotide sequence of the nucleic acid molecule of any one of claims 1, 2, 3, 4, or 5.

5 8. An isolated nucleic acid molecule comprising the nucleic acid molecule of any one of claims 1, 2, 3, 4, or 5, and a nucleotide sequence encoding a heterologous polypeptide.

9. A vector comprising the nucleic acid molecule of any one of claims 1, 2, 3, 4,  
10 or 5.

10. The vector of claim 9, which is an expression vector.

11. A host cell transfected with the expression vector of claim 10.

12. A method of producing a polypeptide comprising culturing the host cell of claim 11 in an appropriate culture medium to, thereby, produce the polypeptide.

13. An isolated polypeptide selected from the group consisting of:

a) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO: 2, wherein the fragment comprises at least 15 contiguous amino acids of SEQ ID NO: 2;

b) a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO: 2, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of SEQ ID NO: 1 or 3 under stringent conditions;

c) a polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 60 % identical to a nucleic acid comprising the nucleotide sequence of SEQ ID NO: 1 or 3;

d) a polypeptide comprising an amino acid sequence which is at least 50% identical to the amino acid sequence of SEQ ID NO: 2.

14. The isolated polypeptide of claim 13 comprising the amino acid sequence of SEQ ID NO: 2.

15. The polypeptide of claim 13, further comprising heterologous amino acid sequences.

16. An antibody which selectively binds to a polypeptide of claim 13.

17. A method for detecting the presence of a polypeptide of claim 13 in a sample comprising:

- 5           a)       contacting the sample with a compound which selectively binds to the polypeptide; and
- b)       determining whether the compound binds to the polypeptide in the sample to thereby detect the presence of a polypeptide of claim 13 in the sample.

10           18. The method of claim 17, wherein the compound which binds to the polypeptide is an antibody.

19. A kit comprising a compound which selectively binds to a polypeptide of claim 13 and instructions for use.

15           20. A method for detecting the presence of a nucleic acid molecule of any one of claims 1, 2, 3, 4, or 5 in a sample comprising:

- a)       contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and
- 20           b)       determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample to thereby detect the presence of a nucleic acid molecule of any one of claims 1, 2, 3, 4, or 5 in the sample.

21. The method of claim 20, wherein the sample comprises mRNA molecules  
25 and is contacted with a nucleic acid probe.

22. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of any one of claims 1, 2, 3, 4, or 5 and instructions for use.

30           23. A method for identifying a compound which binds to a polypeptide of claim 13 comprising:

- a)       contacting the polypeptide, or a cell expressing the polypeptide with a test compound; and
- b)       determining whether the polypeptide binds to the test compound.

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24. The method of claim 23, wherein the binding of the test compound to the polypeptide is detected by a method selected from the group consisting of:

- 5                   a) detection of binding by direct detection of test compound/polypeptide binding;
- b) detection of binding using a competition binding assay; and
- c) detection of binding using an assay for  $\beta$ CAP73 activity.

25. A method for modulating the activity of a polypeptide of claim 13 comprising contacting the polypeptide or a cell expressing the polypeptide with a compound  
10 which binds to the polypeptide in a sufficient concentration to modulate the activity of the polypeptide.

26. A method for identifying a compound which modulates the activity of a polypeptide of claim 13 comprising:

- 15                   a) contacting a polypeptide of claim 13 with a test compound; and
- b) determining the effect of the test compound on the activity of the polypeptide to thereby identify a compound which modulates the activity of the polypeptide.

27. A gene therapy for treating a disease or condition comprising administering a  
20 pharmaceutical composition comprising a gene therapy vector encoding a molecular system comprising a protein selected from the group consisting of a polypeptide of claim 13 or a homolog thereof.

28. A composition for the gene therapy of claim 27, comprising a gene therapy  
25 vector encoding a protein selected from the group consisting a polypeptide of claim 13 or a homolog thereof.